CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KJ/W.No.14/CSR-04/317d/CEMENT/2017-18 Date: 12.04.2017

TEST REPORT ON CEMENT

*** Customer**	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. K. Jagadish,** #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
*** Name of Work**	:	Improvements to Drain at Bagalagunte (Near Maramma temple old village) in Ward No.14, BBMP, Bangalore.
*** Reference**	:	BBMP/DZ/AEE/TDSD/PR/18/2017-18 Dated: 10.04.2017
*** Sample ID**	:	Cement – Sample 4
Sample Received on	:	10.04.2017
Period of Testing	:	10.04.2017 to 12.04.2017

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The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	29.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	170 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/KJ/W.No.14/CSR-04/317d/SAND-Gradation/2017-18 12.04.2017

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of Work	:	Improvements to Drain at Bagalagunte (Near Maramma temple old village) in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/18/2017-18 Dated: 10.04.2017
* Sample ID	:	Fine Aggregates – Sample 4
Technical Reference	:	IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	:	10.04.2017
Date of Testing	:	12.04.2017

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Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.70	90-100	90-100	90-100	95-100
2.36	78.70	60-95	75-100	85-100	95-100
1.18	58.70	30-70	55-90	75-100	90-100
600 Micron	26.20	15-34	35-59	60-79	80-100
300 Micron	10.70	5-20	8-30	12-40	15-50
150 Micron	4.70	0-10	0-10	0-10	0-15

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/KJ/W.No.14/Steel/2017-18 13.04.2017

TEST REPORT ON REINFORCEMENT STEEL

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of Sub work	:	Improvements to Drain at Bagalagunte (Near Maramma temple old village) in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/18/2017-18 Dated: 10.04.2017
* Samples ID	:	10 mm Bar
Technical Reference	:	IS: 1786-2008
Date of Testing	:	13.04.2017

Sl No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm2	Tensile strength (Ultimate stress) N/mm2	Elongation percent gauge length		
1	10	0.62	513	515	13.25	O.K	O.K

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Job No.: CTCE/BBMP/KJ/W.No.14/CSR-04/317d/Cube/2017-18 17.05.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of the work	:	Improvements to Drain at Bagalagunte (Near Maramma temple old village) in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/18/2017-18 Dated: 10.04.2017
* Sample ID	:	RCC Drain Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	17.05.2017

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Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.04.2017	17.05.2017	8.295	475.5	21.13
2	19.04.2017	17.05.2017	8.325	490.3	21.79
3	19.04.2017	17.05.2017	8.405	512.8	22.79

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Job No.: CTCE/BBMP/KJ/W.No.14/CSR-04/317d/Pre Slab/2017-18

22.04.2017

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CORE

* Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Mr. K. Jagadish,** #3424, 6th Cross, Gayathrinagar, Bangalore – 560 021.
* Name of work	:	Improvements to Drain at Bagalagunte (Near Maramma temple old village) in Ward No.14, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/TDSD/PR/18/2017-18 Dated: 10.04.2017
* Sample ID	:	Precast slab
* Grade of Concrete	:	M_{20}
Techinical Reference	:	IS:516-1959 (RA- 2013), SP-24:1983.
Sample Received on	:	17.04.2017
Date of Testing	:	22.04.2017

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Sl. No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	82.00	0.405	2515.42	1.64	0.961	31.25	15.92	17.19	17.88	22.36
2	50.00	83.00	0.412	2528.07	1.66	0.963	32.90	16.76	18.10	17.43	21.79
3	50.00	84.00	0.420	2546.48	1.68	0.965	33.65	17.14	18.51	17.87	22.34

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